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INGRASSIA FISHER & LORENZ, P.C.
7010 E. COCHISE ROAD
SCOTTSDALE, AZ 85253

EXAMINER	
LIU, BEN H	

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
05/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ifllaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/799,063	BRIDGELALL, RAJ	
	Examiner	Art Unit	
	BEN H. LIU	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to an amendment/response filed on February 29, 2008.

2. No claims have been cancelled.

3. No claims have been added.

4. Claims 1, 7, 12, and 17 have been amended.

5. Claims 1-23 are currently pending.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-9, 11-12, and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelaez et al. (U.S. Patent 7,142,839) in view of Aljadeff et al. (U.S. Patent 6,963,289).

For independent claim 1, Pelaez et al. disclose an apparatus for forming a Wireless Personal Area Network (WPAN) from a plurality of Personal Area Network (PAN) devices comprising a location determinator to determine a location for each of said plurality of PAN devices *(see column 2 lines 18-32 and 60-62, which recite a location server for determining the location of wireless terminals)*, a comparator coupled to the determinator and configured to compare said location for each of said plurality of PAN devices with a WPAN association criteria in order to determine an identification of each of said plurality of PAN devices that at least partially satisfy said WPAN criteria *(see column 2 lines 43-52, which recite an Application Server that identifies each wireless terminal that are determined to be in a location-based group)*, and a communication link coupled to the comparator configured to transmit, to said plurality of PAN devices that at least partially satisfy said WPAN criteria, said identification of each of said plurality of PAN devices that at least partially satisfy said WPAN criteria in order to form a WPAN *(see column 3 lines 31-38, which recite routing messages to the wireless terminals in a location-based group wherein the message includes identification information determined by the Application Server for the purposes of routing)*.

Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the plurality of electronic devices each have a Radio Frequency Identification (RFID) tag function and wherein the base station is configured to address the RFID tag function of each of said plurality of PAN devices. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag system that provides location finding in a wireless network *(see abstract and*

figure 2). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag system that provide a RFID tag function for wireless terminals as taught by Aljadeff et al. with the system for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag system with the system for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 2, Pelaez et al. disclose an apparatus for forming a wireless network wherein the determinator the comparator selects those of said plurality of PAN devices that move substantially together and the communication link transmits the identification of the selected devices *(see column 3 lines 6-12, which recite grouping wireless terminals in a location that may move)*. Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the determinator determines the location of each of said plurality of PAN device as a function of time. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag system *(see abstract and figure 2)* that determines the location of wireless terminals by using the time difference of arrival for received signals *(see column 4 lines 21-25)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag system that determines the location of a wireless terminal as a function of time as taught by Aljadeff et al. with the system for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as

taught by Aljadeff et al. The motivation for using the RFID tag system with the system for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 3, Pelaez et al. disclose an apparatus for forming a network wherein the communication link comprises a main hub transceiver coupled to the determinator *(see figure 1, which recite an application server coupled to a location server)* and a remote relay transceiver coupled to said plurality of PAN devices *(see figure 1, which recite a call state function controller coupled to a plurality of wireless terminals)*.

For claim 4, Pelaez et al. disclose an apparatus for forming a network wherein the plurality of PAN devices intercommunicate using a first combination of data rate and signal power *(see figure 1, which recite a plurality of wireless terminals communicating with the call state function controller using a data rate and signal power suitable for wireless transmission)* and the main hub and remote relay communicate using a second combination of data rate and signal power, different than the first combination *(see figure 1, which recite an application server communicating with a location server using a data rate and signal power suitable for wired transmission)*.

For claim 5, Pelaez et al. disclose an apparatus for forming a network wherein the first combination, relative to the second combination uses shorter range lower power signals *(see figure 1, which recite a plurality of wireless terminals communicating with the call state function controller using a data rate and signal power suitable for wireless transmission)*, and the second combination, relative to the first combination, uses longer range higher power signals *(see figure*

1, which recite an application server communicating with a location server using a data rate and signal power suitable for wired transmission).

For claim 6, Pelaez et al. disclose an apparatus for forming a network wherein the communication link comprises a wireline link to a remote relay and a wireless link from the remote relay to the plurality of PAN devices *(see figure 1, which recite an application server communicating with a location server using a wired transmission).*

For independent claim 7, Pelaez et al. disclose a Wireless Personal Area Network (WPAN) comprising a remote communication node wirelessly coupled to at least two electronic devices *(see figure 1, which recites a Call State Function Controller wirelessly coupled to wireless terminals)*; and a base station coupled to said remote communication node and the plurality of electronic devices *(see column 2 lines 43-59, which recite an Application Server that is coupled to the Call State Function Controller)*, wherein said base station is configured to determine a location for each of said plurality of electronic devices *(see column 2 lines 18-32 and 60-62, which recite a location server for determining the location of wireless terminals)*; compare said location for each of said plurality of electronic devices with a WPAN association criteria in order to determine an identification of each of said plurality of electronic devices that at least partially satisfies said WPAN association criteria *(see column 2 lines 43-52, which recite an Application Server that identifies each wireless terminal that are determined to be in a location-based group)*; and transmit said identification of each of said plurality of electronic devices that at least partially satisfy said WPAN association criteria to said remote communication node for distribution to at least two of said plurality of electronic devices *(see column 3 lines 31-38, which recite routing messages to the wireless terminals in a location-*

based group wherein the message includes identification information determined by the Application Server for the purposes of routing).

Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the plurality of electronic devices each have a Radio Frequency Identification (RFID) tag function and wherein the base station is configured to address the RFID tag function of each of said plurality of PAN devices. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag system that provides location finding in a wireless network *(see abstract and figure 2)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag system that provide a RFID tag function for wireless terminals as taught by Aljadeff et al. with the system for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag system with the system for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 8, Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the base station comprises at least one transceiver and at least three receivers for determining the location of said plurality of electronic devices. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag system that communicates with the wireless terminals using at least three location units and one master unit *(see column 3 lines 56-59)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag system that communicates with the wireless terminal using at least

three location units and one master unit as taught by Aljadeff et al. with the system for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag system with the system for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 9, Pelaez et al. discloses a network that determines the location of the wireless terminals wherein the WPAN association criteria employed by the base station include identifying a subset of the plurality of electronic devices that move as a group *(see column 3 lines 6-12, which recite grouping wireless terminals in a location wherein the location may move)*.

For claim 11, Pelaez et al. discloses a network that determines the location of the wireless terminals wherein the base station and the remote communication node intercommunicate using an 802.11 or Bluetooth or wireline communication arrangement *(see figure 1, which recite an application server communicating with a location server using a wired transmission)*.

For independent claim 12, Pelaez et al. disclose a method for forming a Wireless Personal Area Network (WPAN) with a plurality of Personal Area Network (PAN) devices, comprising the steps of determining a location for each of said plurality of PAN devices with a WPAN association criteria *(see column 2 lines 18-32 and 60-62, which recite a location server for determining the location of wireless terminals)*; determining an identification of a subset of said plurality of PAN devices based at least in part upon said comparing step *(see column 2 lines*

43-52, which recite an Application Server that identifies each wireless terminal that are determined to be in a location-based group); and transmitting said identification of said subset of said plurality of PAN devices that at least partially satisfy said WPAN criteria to at least said subset of PAN devices *(see column 3 lines 31-38, which recite routing messages to the wireless terminals in a location-based group wherein the message includes identification information determined by the Application Server for the purposes of routing)*.

Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the method utilizes radio frequency identification (RFID) tag function of each of said plurality of PAN devices. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag method that provides location finding in a wireless network *(see abstract and figure 2)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag method that provide a RFID tag function for wireless terminals as taught by Aljadeff et al. with the method for forming a wireless network using location information as taught by Pelaez et al. The RFID tag method can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag method with the method for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 15, Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the determining step comprises broadcasting a signal from a base station and detecting return signals from an RFID tag function associated with each of the plurality of PAN devices. Aljadeff et al. from the same or similar fields of endeavor disclose a location unit

that receives signals from RFID tags *(see column 3 lines 60-63)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag system including a location unit that receives signals from RFID tags as taught by Aljadeff et al. with the system for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag system with the system for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 16, Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the determining step comprises detecting the return signals using multiple receivers. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag system that communicates with the wireless terminals using at least three location units *(see column 3 lines 56-59)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag system that communicates with the wireless terminal using at least three location units as taught by Aljadeff et al. with the system for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag system with the system for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For independent claim 17, Pelaez et al. disclose a method for forming a Wireless Personal Area Network (WPAN) from a plurality of Personal Area Network (PAN) devices comprising determining a location for each of said plurality of PAN devices using an RFID tag location technique *(see column 2 lines 18-32 and 60-62, which recite a location server for determining the location of wireless terminals)*; comparing the location determined for each of the PAN devices with a WPAN association criteria and choosing a subset of the PAN devices whose locations at least partially satisfy the WPAN criteria *(see column 2 lines 43-52, which recite an Application Server that identifies each wireless terminal that are determined to be in a location-based group)*; and transmitting identification of the devices in the subset to at least the subset of PAN devices *(see column 3 lines 31-38, which recite routing messages to the wireless terminals in a location-based group wherein the message includes identification information determined by the Application Server for the purposes of routing)*.

Pelaez et al. discloses all the subject matter of the claimed invention with the exception wherein the method utilizes radio frequency identification (RFID) tag function of each of said plurality of PAN devices. Aljadeff et al. from the same or similar fields of endeavor disclose a RFID tag method that provides location finding in a wireless network *(see abstract and figure 2)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RFID tag method that provide a RFID tag function for wireless terminals as taught by Aljadeff et al. with the method for forming a wireless network using location information as taught by Pelaez et al. The RFID tag system can be implemented by incorporating a RFID tag in each mobile device and designating access points of the wireless network as the location units as taught by Aljadeff et al. The motivation for using the RFID tag

method with the method for forming a wireless network using location information is to reduce the cost of the system by using inexpensive RFID components.

For claim 18, Pelaez et al. disclose a method for forming a wireless network wherein the choosing step comprises choosing those PAN devices that are within a predetermined distance of each other *(see column 1 lines 29-33, which recite grouping wireless terminals within a proximity of a location)*.

For claim 19, Pelaez et al. disclose a method for forming a wireless network wherein the choosing step comprises choosing those PAN devices that move substantially as a group *(see column 3 lines 6-12, which recite grouping wireless terminals in a location wherein the location may move)*.

For claim 20, Pelaez et al. disclose a method for forming a wireless network wherein the choosing step comprises choosing those PAN devices that are within a predetermined distance of each other and move substantially as a group *(see column 3 lines 6-12, which recite grouping wireless terminals in a location wherein the location may move)*.

For claim 21, Pelaez et al. disclose a method for forming a wireless network wherein the transmitting step comprises first transmitting to a remote relay and second transmitting from the remote relay to the subset of PAN devices *(see figure 1, which recite transmitting from the application server to the call state function controller to the wireless terminals)*.

For claim 22, Pelaez et al. disclose a method for forming a wireless network wherein the first transmitting step comprises transmitting over a wireline link to the remote relay *(see figure 1, which recite transmitting from the application server to the call state function controller using a wired connection)*.

For claim 23, Pelaez et al. disclose a method for forming a wireless network wherein the second transmitting step comprises transmitting over a wireless link *(see figure 1, which recite transmitting from the call state function controller to the wireless terminals using a wireless connection)*.

8. Claims 10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelaez et al. (U.S. Patent 7,142,839) in view of Aljadeff et al. (U.S. Patent 6,963,289) as applied to claims 7 and 12, and further in view of Van Valkenburg (U.S. Patent Application Publication 2005/0180343).

For claim 10, Pelaez et al. and Aljadeff et al. discloses all the subject matter of the claimed invention with the exception wherein the plurality of electronic devices intercommunicate using a Bluetooth or Zigbee compliant communicator function. Van Valkenburg from the same or similar fields of endeavor disclose forming a wireless network including a plurality of wireless terminals using Bluetooth *(see paragraph 1)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the Bluetooth communicator function to form a wireless network as taught by Van Valkenburg with the system for forming a wireless network using location information as taught by Pelaez et al. and Aljadeff et al. The Bluetooth network can be implemented by deploying wireless terminals capable of Bluetooth communications as taught by Van Valkenburg. The motivation for using Bluetooth to form a wireless network is to reduce the power consumption of the system by using low powered Bluetooth standard.

For claim 13, Pelaez et al. and Aljadeff et al. disclose all the subject matter of the claimed invention with the exception of forming an ad-hoc network of said plurality of PAN devices, intercommunicating with each other and with the base station. Van Valkenburg from the same or similar fields of endeavor discloses forming an ad-hoc wireless network *(see paragraph 1)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to form an ad-hoc wireless network as taught by Van Valkenburg with the system for forming a wireless network using location information as taught by Pelaez et al. and Aljadeff et al. The ad-hoc network can be implemented by configuring the wireless terminals to detect network devices within its range as taught by Van Valkenburg. The motivation for for forming a wireless network is to improve the flexibility of the system by allowing wireless terminals to establish connections without using a base station.

For claim 14, Pelaez et al. and Aljadeff et al. discloses all the subject matter of the claimed invention with the exception wherein the forming step employs the Bluetooth or Zigbee standard. Van Valkenburg from the same or similar fields of endeavor discloses forming a wireless network including a plurality of wireless terminals using Bluetooth *(see paragraph 1)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the Bluetooth communicator function to form a wireless network as taught by Van Valkenburg with the system for forming a wireless network using location information as taught by Pelaez et al. and Aljadeff et al. The Bluetooth network can be implemented by deploying wireless terminals capable of Bluetooth communications as taught by Van Valkenburg. The motivation for using Bluetooth to form a wireless network is to reduce the power consumption of the system by using low powered Bluetooth standard.

Response to Arguments

9. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *(See form PTO-892).*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BEN H. LIU whose telephone number is (571)270-3118. The examiner can normally be reached on 9:00AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2616

BL